Chapter 16

Motorola MC68HC11 Family MCU Architecture

Lesson 3
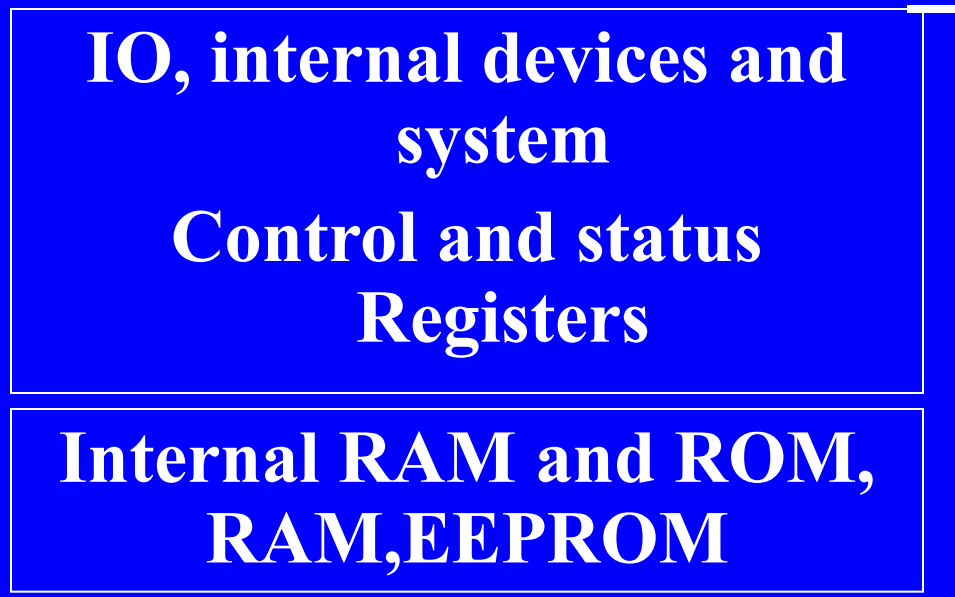
Memory

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On-Chip Memory Addresses

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64 kB linear addressing space

68HC11/12

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Address

IO, internal devices and system

Control and status Registers

Internal RAM and ROM, RAM,EEPROM

Internal-devices Registers Data and Program, constants, stored tables Common Memory

On-Chip Memory Architecture

Address

IO and internal devices Control and Status Registers

OPTION, COPRS, PPROG, IPRO, INIT,CONFIG, TESTI

Internal RAM and ROM, RAM,EEPROM

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On-Chip Memory Addresses 68HC11A8

OPTION, COPRS, IPRO, INIT, CONFIG, TESTI

Address Space

X'000H-34H	**IO and internal Devices Registers**
X'039H-3FH	**System Function Control Registers**
X'040H-FFH	
B600H-7FFH	**512kB EEPROM**
E000H-FFFFH	**8 kB ROM**

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68HC11A8

Internal 8kB ROM

E000H-FEBFH → **User Program, constants, stored tables**

FEC0H-FFFBH → **Interrupt Vectors**

FEFCH-FFFFH → **Reset vector (FFFC-FDH), Power-up reset vector (FFFE-FFH)**

Memory Map 68HC11E9

64 kB address space

Address Space

IO and internal

X'000H-FFH → **Devices, and System Registers and Internal RAM**

X000H-FFH → **Internal RAM addressable by 8-bit as the Registers**

Off-chip addresses

→ **53 kB External ROM/RAM**

B600H-7FFH → **Internal EEPROM**

D000H-FFFFH → **Internal 12kB ROM**

X' and X eight bits are as per init register

Summary

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We learnt

- On-Chip Memory Addresses

- Memory Map

Memory Map

- IO/Devices Control and Status Registers

- 192-byte Internal RAM

- Internal ROM

- Internal EEPROM

- External ROM/RAM

End of Lesson 3 on Memory